0001

WATER QUALITY MEMORANDUM

Utah Coal Regulatory Program

February 11, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor JDS 02/11/09

FROM: April A. Abate, Environmental Scientist II AAA 2-11-09

RE: 2008 Fourth Quarter Water Monitoring, Nevada Electric Investment Corporation, Wellington Preparation Plant, C/007/0012, Task ID #3190

The Wellington Preparation Plant is currently in temporary cessation. No mining or coal processing activities currently take place there, nor is the site in active reclamation. Water-monitoring requirements are in Sections 7.23 and 7.31.2 through 7.31.22, and Tables 7.24-2 and 7.24-5 of the MRP.

1. On what date does the MRP require a five-year re-sampling of baseline water data.

Baseline parameters will be collected in the year preceding permit renewal. The next renewal submittal is due 08/10/09 and the next renewal is due 12/10/09. Five-year baseline resampling should be done prior to renewal. The operator has indicated that baseline sampling will occur in the first quarter 2009.

2. Were data submitted for all of the MRP required sites?

There is no spring or in-mine monitoring at this site.

Streams and Ponds YES ☒ NO ☐

The Permittee is required to analyze samples from streams at SW-1, SW-2A, SW-3, and SW-4 and from ponds at SW-5, SW-6, SW-7, and SW-8 for the parameters in Table 7.24-5, and to measure flow only at SW-2. In addition, samples from SW-4 and SW-5 are to also be analyzed for benzene, toluene, ethylbenzene, xylene, and naphthalene (BTEXN) and propylene glycol. Monitoring is done quarterly. All surface water data were reported as within normal ranges.

SW-3, SW-4, and all the ponds were dry during the fourth quarter 2008.

Wells YES ☒ NO ☐

The Permittee is required to analyze samples from GW-1, GW-3, GW-4, GW-6, GW-7, GW-8, GW-9, GW-9B, GW-10, GW-12, GW-13, GW-14, GW-15A, GW-15B, GW-16, and GW-17 for the parameters in Table 7.24-2, and to measure depth only at GW-2. In addition, samples from GW-4 and GW-6 are to also be analyzed for BTEXN and propylene glycol. Monitoring is to be done quarterly.

Wells GW-3, GW-13 and GW-17 were gauged but not sampled. It is presumed that similar to the third quarter, there was insufficient water to collect samples for analyses at these wells.

UPDES YES ☒ NO ☐

Six UPDES permitted outfalls at the Wellington Preparation Plant are monitored monthly: #UTG040010-003, 004, 005, 006, 007, and 008. There was no reported flow at any of the UPDES sites during the fourth quarter 2008.

3. Were all required parameters reported for each site?

Streams and Ponds YES ☐ NO ☐

As noted previously, SW-3, SW-4, and all the ponds were dry during the fourth quarter 2008.

Wells YES ☐ NO ☒

Static water level was measured but inflow was not sufficient to allow purging and sampling at GW-3, GW-13, and GW-17 during the fourth quarter 2008.

UPDES YES ☐ NO ☐

As noted previously, no reported flow at any of the UPDES sites was observed during the fourth quarter 2008.

4. Were any irregularities found in the data?

Listed parameters were more than two standard deviations from the mean. An asterisk (*) indicates this is not a parameter specifically required by the MRP.

Streams and Ponds YES ☐ NO ☒

Boron and Selenium are known pollutants produced from coal fines. Selenium concentrations have been consistently below detection limits for the past twelve months from the surface water data samples analyzed. Boron concentrations in surface water samples analyzed have consistently been below the 0.75 mg/L standard for Class 4 surface water.

Wells YES ☒ NO ☐

Several parameters continue to be outside two standard deviations from the mean at GW-15A and GW-15B. However, these wells are considered to be upgradient of the coal fine impoundments.

A data analysis was run displaying data from the past three years on the groundwater monitoring wells GW-8, GW-9, GW-12 and GW-15A. The former three have shown the highest Total Dissolved Solids (TDS) concentrations of all the groundwater monitoring wells. Making the assumption that TDS concentrations in GW-15A are representative of "background" levels of TDS, we compare the concentrations of TDS versus time in the plots shown on the linear regression graphs located on the pages 5 and 6. The data show that TDS concentrations in GW-12 have dropped considerably to levels more consistent with GW-8, while TDS concentrations in GW-9 appear highest and increasing with time.

The Box and Whisker plot is useful in showing extreme values and the range of middle values. Data from three wells were compared on this plot (page 7) to symbolize the range of TDS concentrations found in the groundwater monitoring wells at the Wellington site. Since GW-12 and GW-8 had similar concentrations, GW-8 was chosen to symbolize the concentrations. It is obvious from this plot that TDS concentrations in some of the wells are well above the assumed "background" concentrations found in GW-15A.

UPDES YES ☐ NO ☐

Not Applicable. No discharges were reported from any of the UPDES monitoring locations.

5. Did the Permittee make a timely submittal of all data, including initially missing data, and satisfactorily explain irregular data? YES ☒ NO ☐

6. Does the Mine Permittee need to submit more information to fulfill this quarter's

monitoring requirements? YES ☐ NO ☒

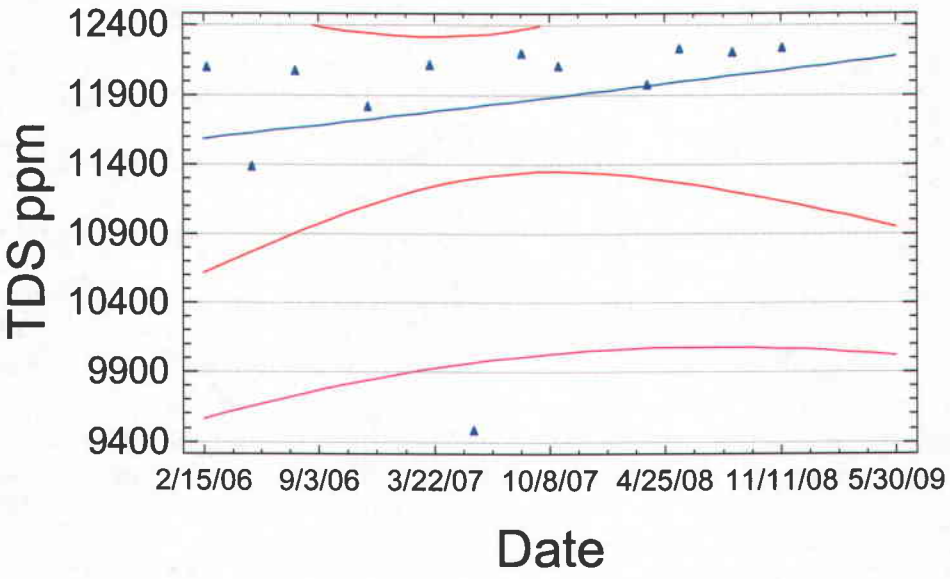
7. **Based on your review, what further actions, if any, do you recommend?**

The operator has indicated that baseline parameters are to be collected in the first quarter of 2009. Upon receipt of that data, the division will review and make some recommendations regarding any additions or omissions to the existing sampling plan prior to permit renewal at the end of 2009. The permit is scheduled to renew on 12/10/09; therefore, the next permit renewal submittal is due 08/10/09.

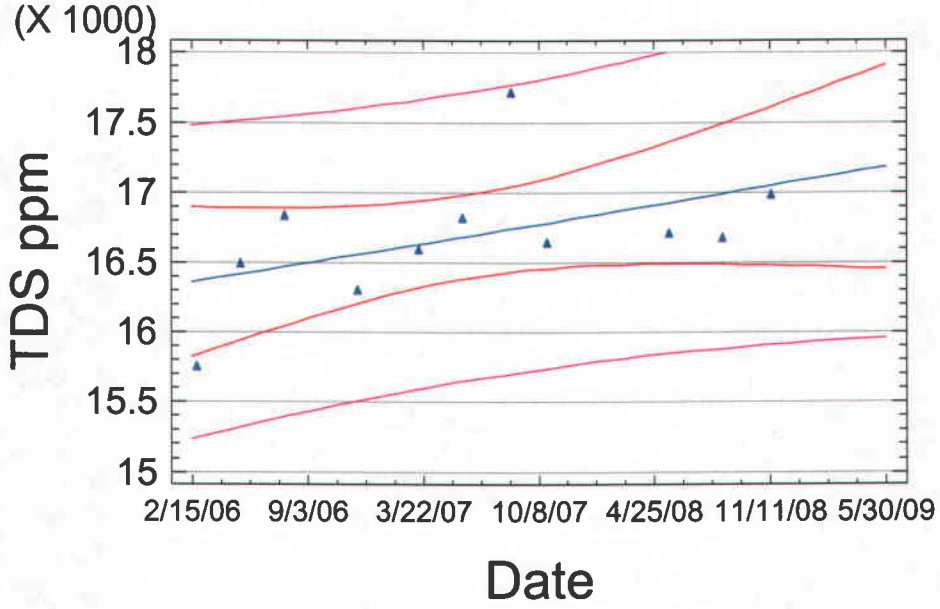
8. **Follow-up from last quarter, if necessary.**

None

Plot of GW-8

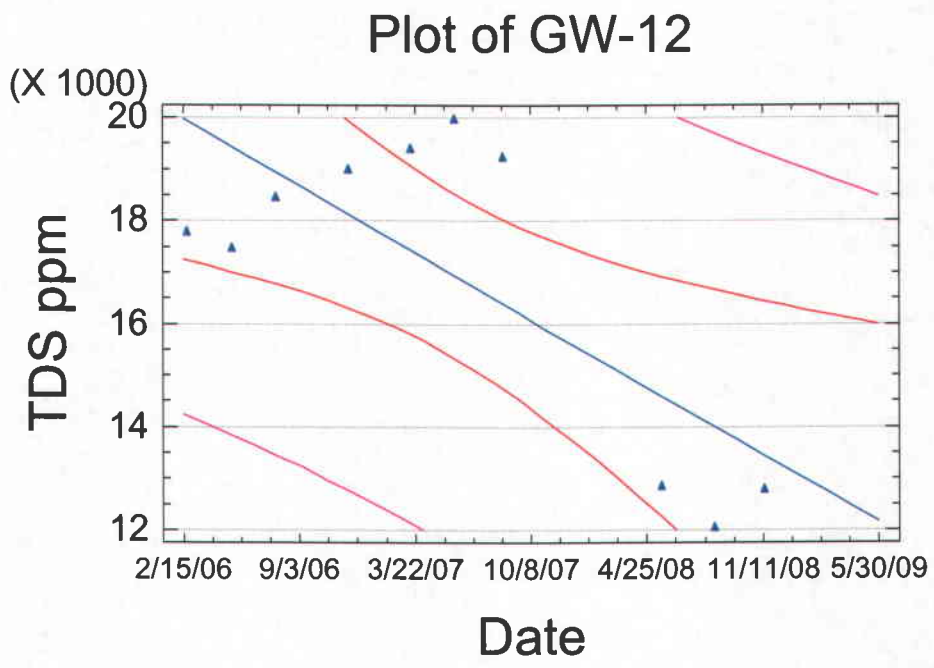


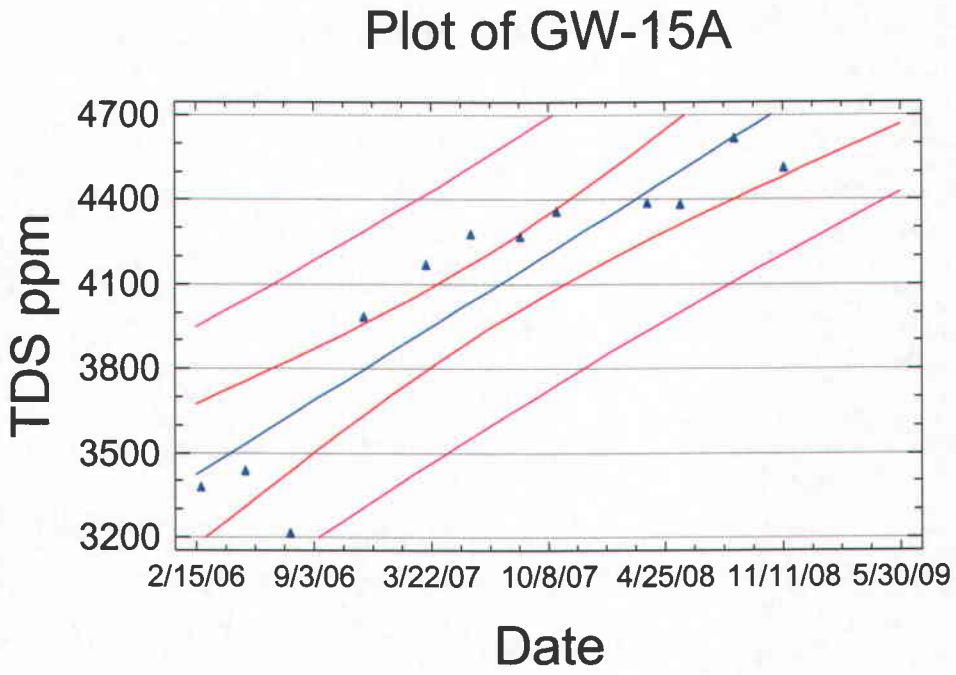
Plot of GW-9



Legend:

- Linear relationship of TDS versus time based on the data points.
- 95% statistical confidence level range for the data
- Prediction limit range for the data.



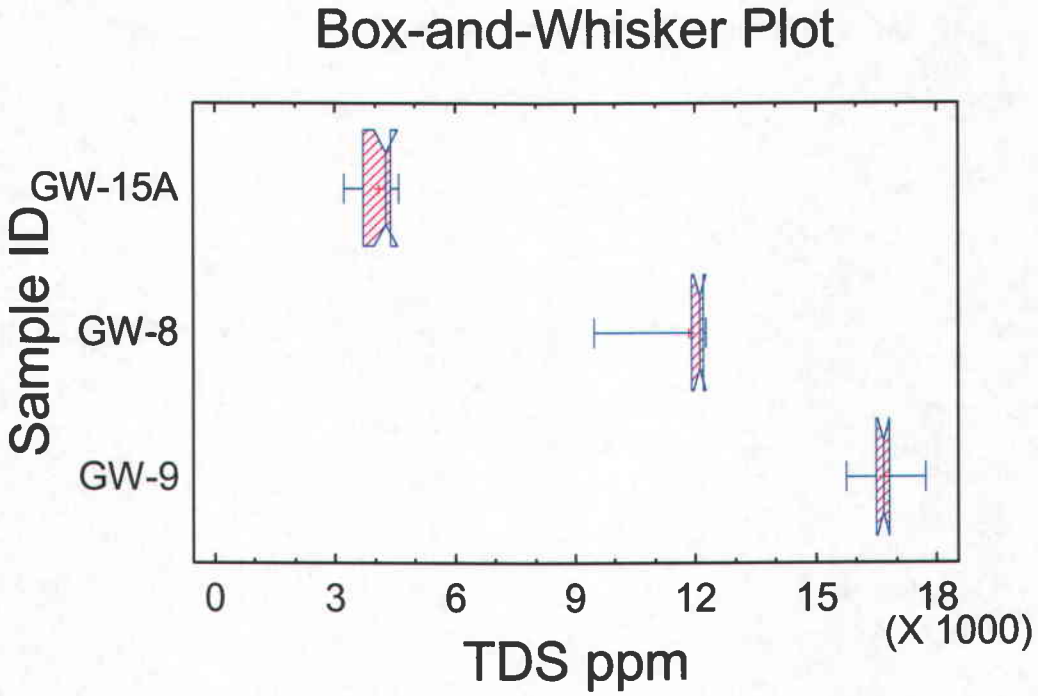


Legend:

Linear relationship of TDS versus time based on the data points.

95% statistical confidence level range for the data

Prediction limit range for the data.



Notes: The middle ranges of values are plotted inside the "box" while the outlying range of values represents the "whiskers". The mean value is plotted as a "+" symbol while the median value is the blue line plotted in the center of the "box".

O:\007012.WEL\Water Quality\WQ_08-4.doc